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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,509	09/16/2003	Norio Makiyama	242729US0CONT	1357
22850	7590	06/28/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			BECK, DAVID THOMAS	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/662,509	MAKIYAMA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	David T. Beck	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 September 2003.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 15-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 15-26 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. 09/880116.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date: _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/16/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owaki (5,226,955) in view of Ashida et al (5,503,899).

With regard to claim 15, Owaki teaches a method of producing a magnetic recording medium (abstract) which includes polishing/texturing the surface of the magnetic recording medium by abrasively contacting the surface with a suede type polishing pad (column 3, lines 51-60), but does not teach the specific characteristics of the pad. Ashida et al teach a suede-like sheet which is useful in making cloths (abstract). The cloth is composed of fiber bundles composed of fine fibers (A), having a fineness of 0.02-0.2 denier (0.022 dtex – 0.22 dtex) which extend through the entire sheet, which includes to a depth of 1/3 in the thickness direction from the napped surface of the sheet, and microfine fibers (B), having a fineness of not more than 1/5 the denier or 0.004-0.04 denier (0.004-0.04 dtex) of said fine fibers, an elastomeric polymer and has a fibrous nap on its surface (abstract). The elastomeric polymer is of high molecular weight and is impregnated into the nonwoven fabric and coagulated (column 6, lines 6-34) creating a porous state. The substrate has a napped surface on at least one of the sides of the sheet composed chiefly of the fine and microfine fibers (column

6, lines 52-57). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the suede pad taught by Ashida et al in the process taught by Owaki. The motivation to do so would have been to select a suede product useful for making cloths (Ashida et al, abstract) and one that would be resistant to pilling (Ashida et al, column 1, lines 1-4).

With regard to claim 16, Ashida et al teach a fabric identical in composition to the fabric claimed in claim 1. Therefore, it is reasonable to presume that the wet elastic modulus of the high-molecular elastomer is 0.05 to 0.95 kg/mm<sup>2</sup> is inherent to Ashida et al. Support for said presumption is found in the use of like materials (i.e. a cloth composed of fiber bundles composed of fine fibers and microfine fibers, an elastomeric polymer impregnation and has a fibrous nap on its surface) that would result in the claimed property. The burden is upon the applicant to prove otherwise *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of a wet elastic modulus of the high-molecular elastomer is 0.05 to 0.95 kg/mm<sup>2</sup> and would obviously have been present once the Ashida product is provided. In the present invention, one would have been motivated to have a wet elastic modulus as described to ensure a flexible cloth.

With regard to claim 17, Ashida et al teach that the high-molecular elastomer can be a polyurethane produced from at least one polymer diol having an average molecular weight of 500-3,000, at least one diisocyanate and at least one low molecular weight compound having at least two active hydrogen atoms such as ethylene glycol (column 6, lines 6-21). Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a cloth with the polyurethane

composition having a mole ratio of polymer diol species and diisocyanate being 1/1.5 – 1/5, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to have the mole ratio within the stated range to have an appropriately elastic polyurethane.

With regard to claims 18-20, Ashida et al teach that the fine fibers (A) and the microfine fibers (B) can both be made of polyamides such as 6-nylon and 66-nylon or polyesters (column 3, lines 7-16).

With regard to claim 21, Ashida et al teach that the microfine fibers (B) have a fineness of not more than 1/5 the denier of the fine fibers (A), or 0.004-0.04 denier (0.004-0.04 dtex) (abstract).

With regard to claim 22, Ashida et al teach in examples 1 and 2 that the thickness of the sheet is 1.2 mm (columns 7 and 9).

With regard to claim 23, Ashida et al teach teach a fabric identical in composition to the fabric claimed in claim 1, but do not state the desired density of the fabric. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a cloth with an apparent density within the range of 0.2 to 0.6 g/cm<sup>3</sup>, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to adjust the density to the claimed range in order to create a light-weight but substantial cloth.

With regard to claim 24, Ashida et al teach that the amount of the polyurethane composition in the fibrous substrate is within the range of 10 to 50% by weight (column 6, lines 29-32).

With regard to claim 25, Ashida et al teach that the ultrafine fibers (A) have a fineness of 0.02-0.2 denier (0.022 dtex – 0.22 dtex) and the ultrafine fibers (B) have a fineness of not more than 1/5 the denier, or 0.004-0.04 denier (0.0044-0.044 dtex) (abstract). It should be noted that the ranges for ultrafine fibers (A) and (B) have an overlapping range of 0.022-0.044 dtex. Therefore, in one embodiment, the ultrafine fibers (A) and (B) can have the same fineness.

With regard to claim 26, Ashida et al teach that the ultrafine fibers (A) have a fineness of 0.02-0.2 denier (0.022 dtex – 0.22 dtex) and the ultrafine fibers (B) have a fineness of not more than 1/5 the denier, or 0.004-0.04 denier (0.0044-0.044 dtex) (abstract). Therefore, in one embodiment, it is possible to have the ultrafine fibers (A) and (B) with a fineness range as claimed by the applicant.

### ***Conclusion***

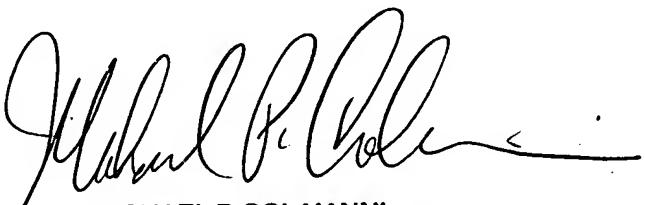
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Beck whose telephone number is 571-272-2942. The examiner can normally be reached on Monday - Friday, 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 517-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DTB  
June 16, 2005

DTB



MICHAEL P. COLAIANNI  
SUPERVISORY PATENT EXAMINER